

Figure 1. FGF-20

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+1  M A P L A E V G G F L G G L E G L G Q Q
    ATGGCTCCCTTAGCCGAAGTCGGGGGCTTTCTGGGCGGCCTGGAGGGCTTGGGCCAGCAG
    TACCGAGGGAATCGGCTTCAGCCCCGAAAGACCCGCCGGACCTCCCGAACCCGGTCGTC
        10         20         30         40         50         60

+1  V G S H F L L P P A G E R P P L L G E R
    GTGGGTTTCGATTTCTGTGCTCCTGCCGGGGAGCGGCCCGCTGCTGGGCGAGCGC
    CACCCAAGCGTAAAGGACAACGGAGGACGGCCCCCTCGCCGGCGGCGACACCCGCTCGCG
        70         80         90        100        110        120

+1  R S A A E R S A R G G P G A A Q L A H L
    AGGAGCGCGGGCGAGCGGAGCGCCCCGCGGGCGGGGGCTGCGCAGCTGGCGCACCTG
    TCCTCGCGCCCGCTCGCCTCGCGGGCGCCCGCCCGCCCCGACGCGTCGACCGCGTGGAC
        130        140        150        160        170        180

+1  H G I L R R R Q L Y C R T G F H L Q I L
    CACGGCATCCTGCGCCGCCGGCAGCTCTATTGCCGCACCGGCTTCCACCTGCAGATCCTG
    GTGCCGTAGGACGCGCGGCCGTCGAGATAACGGCGTGGCCGAAGGTGGACGTCTAGGAC
        190        200        210        220        230        240

+1  P D G S V Q G T R Q D H S L F G I L E F
    CCCGACGGCAGCGTGCAGGGCACCCGGCAGGACCACAGCCTCTTCGGTATCTTGGAATTC
    GGGCTGCCGTCGCACGTCCCGTGGGCGCGTCTGGTGTGCGGAGAAGCCATAGAACCTTAAG
        250        260        270        280        290        300

+1  I S V A V G L V S I R G V D S G L Y L G
    ATCAGTGTGGCAGTGGGACTGGTCACTATTAGAGGTGTGGACAGTGGTCTCTATCTTGGA
    TAGTCACACCGTCACCCCTGACCAGTCATAATCTCCACACCTGTCAACAGAGATAGAACCT
        310        320        330        340        350        360

+1  M N D K G E L Y G S E K L T S E C I F R
    ATGAATGACAAAGGAGAACTCTATGGATCAGAGAACTTACTTCCGAATGCATCTTTAGG
    TACTTACTGTTTCTCTTGAGATACCTAGTCTCTTTGAATGAAGGCTTACGTAGAAATCC
        370        380        390        400        410        420

+1  E Q F E E N W Y N T Y S S N I Y K H G D
    GAGCAGTTTGAAGAGAACTGGTATAACACCTATTCATCTAACATATATAAACATGGAGAC
    CTCGTCAAACCTCTCTTGACCATATTGTGGATAAGTAGATTGTATATATTTGTACCTCTG
        430        440        450        460        470        480

+1  T G R R Y F V A L N K D G T P R D G A R
    ACTGGCCGCAGGTATTTTGTGGCACTTAACAAAGACGGAACCTCAAGAGATGGCGCCAGG
    TGACCGCGCTCCATAAAACACCGTGAATTGTTTCTGCCTTGAGGTTCTCTACCGCGGTCC
        490        500        510        520        530        540

+1  S K R H Q K F T H F L P R P V D P E R V
    TCCAAGAGGCATCAGAAATTTACACATTTCTTACCTAGACAGTGGATCCAGAAAGAGTT
    AGGTTCTCCGTAGTCTTTAAATGTGTAAGAATGGATCTGGTCACCTAGGTCTTTCTCAA
        550        560        570        580        590        600

+1  P E L Y K D L L M Y T *
    CCAGAATTGTACAAGGACCTACTGATGTACACTTGA (SEQ ID NO: 1)
    GGTCTTAACATGTTCTTGATGACTACATGTGAACT (SEQ ID NO: 2)
        610        620        630        640        650        660

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Figure 2. FGF-23

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1  ATGCGCCGCGCCTGTGGCTGGGCCTGGCCTGGCTGCTGGCGCGGGCGCCGGACGCC 60
1  M R R R L W L G L A W L L L A R A P D A 20

61  GCGGGAACCCGAGCGCGTGGCGGGACCGCGCAGCTACCGCACCTGGAGGGCGACGTG 120
21  A G T P S A S R G P R S Y P H L E G D V 40

121  CGCTGGCGGCGCCTCTTCTCCTCACTCACTTCTTCTGCGCGTGGATCCCGGCGGCCG 180
41  R W R R L F S S T H F F L R V D P G G R 60

181  GTGCAGGGCAGCCGCTGGCGCCACGGCCAGGACAGCATCCTGGAGATCCGCTCTGTACAC 240
61  V Q G T R W R H G Q D S I L E I R S V H 80

241  GTGGGCGTCTGGTGCATCAAGCAGTGTCTCAGGCTTCTACGTGGCCATGAACCGCCGG 300
81  V G V V V I K A V S S G F Y V A M N R R 100

301  GGCGCCTCTACGGGTCGCGACTCTACACCGTGGACTGCAGGTTCCGGGAGCGCATCGAA 360
101  G R L Y G S R L Y T V D C R F R E R I E 120

361  GAGAACGGCCACAACACCTACGCCTCACAGCGCTGGCGCCGCCGCGGCCAGCCCATGTT 420
121  E N G H N T Y A S Q R W R R R G Q P M F 140

421  CTGGCGCTGGACAGGAGGGGGGGCCCCGCCAGGCGGCCGACGCGGCGGTACCACCTG 480
141  L A L D R R G G P R P G G R T R R Y H L 160

481  TCCGCCCACTTCTGCCCCGCTCTGGTCTCTGA 513 (SEQ ID NO: 3)
161  S A H F L P V L V S * 171 (SEQ ID NO: 4)

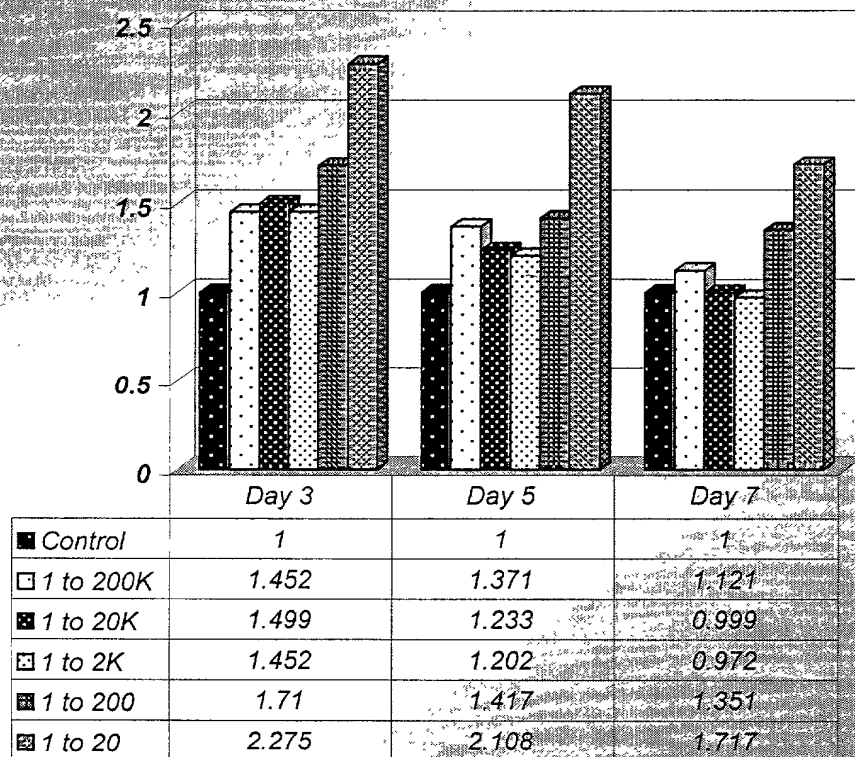
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Fgf-21	MAPLAEVGGF	LGGLEGLGQQ	VGSHFLLPPA	GERPPLLGER	RSAAERSA.R
fgf-9	MAPLGEVGN	FGVQDAV..P	FGNVPVLPV.	.DSPVLLSDH	LGQSEAGGLP
fgf-16	~~~MAEVGGV	FASLDWDLHG	FSSSLGNVPL	ADSPGFLNER	LGQIEGKLQR
fgf-22	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
xfgf-20	MAPLADVGTF	LGGYDALG.Q	VGSHFLLPPA	KDSPLLFNDP	LAQSERLS.R
fgf-21	GGPGAAQLAH	LHGILRRRQL	YCRTGFHLQI	LPDGSVQGTR	QDHSLFGILE
fgf-9	RGPAVTDLDH	LKGILRRRQL	YCRTGFHLEI	FPNGTIQGTR	KDHSRFGILE
fgf-16	GSP..TDFAH	LKGILRRRQL	YCRTGFHLEI	FPNGTVHGTR	HDHSRFGILE
fgf-22	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~XGMLA
xfgf-20	SAP..SDLSH	LQGILRRRQL	YCRTGFHLQI	LPDGNVQGTR	QDHSRFGILE
fgf-21	FISVAVGLVS	IRGVDSGLYL	GMNDKGELYG	SEKLTSECIF	REQFEENWYN
fgf-9	FISIAVGLVS	IRGVDSGLYL	GMNEKGELYG	SEKLTQECVF	REQFEENWYN
fgf-16	FISLAVGLIS	IRGVDSGLYL	GMNERGELYG	SKKLTRECVF	REQFEENWYN
fgf-22	SYSVAVAMVT	TRGVASRLYL	DSNHKGDLYA	SVRLAQESVF	WGQSEENWSY
xfgf-20	FISVAIGLVS	IRGVDTGLYL	GMNDKGELFG	SEKLTSECIF	REQFEENWYN
fgf-21	TYSSNIYKHG	DTGRRYFVAL	NKDGTPRDGA	RSKRHQKFTH	FLPRPVDPER
fgf-9	TYSSNLYKHV	DTGRRYYVAL	NKDGTREGT	RTKRHQKFTH	FLPRPVDPAK
fgf-16	TYASTLYKHS	DSERQYYVAL	NKDGSREGY	RTKRHQKFTH	FLPRPVDPSK
fgf-22	THSSNLYKHV	DTRRRYYVPL	NQGATPSAGT	RSLRRQNYTH	VLPRPVDPAK
xfgf-20	TYSSNLYKHG	DSGRRYFVAL	NKDGTPRDGT	RAKRHQKFTH	FLPRPVDPEK
fgf-21	VPELYKDILL	YT*	(SEQ ID NO: 2)		
fgf-9	VPELYKDILS	QS*	(SEQ ID NO: 5)		
fgf-16	LPSMSRDLFH	YR*	(SEQ ID NO: 6)		
fgf-22	VPELYKDILS	QS*	(SEQ ID NO: 7)		
xfgf-20	VPELYKDLMG	YS*	(SEQ ID NO: 8)		

FIG. 3

A



B

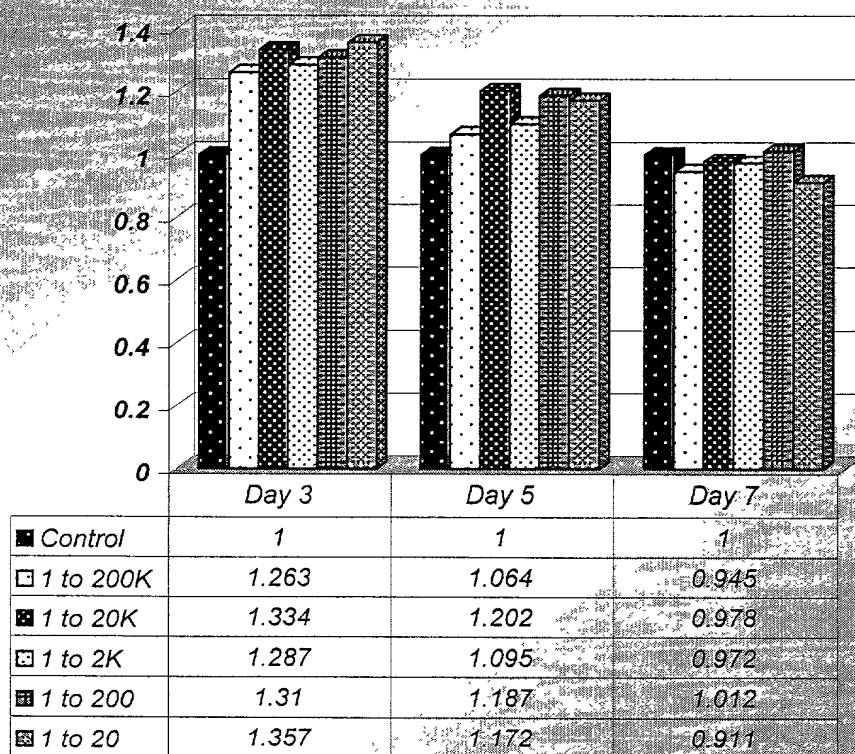


FIG. 4

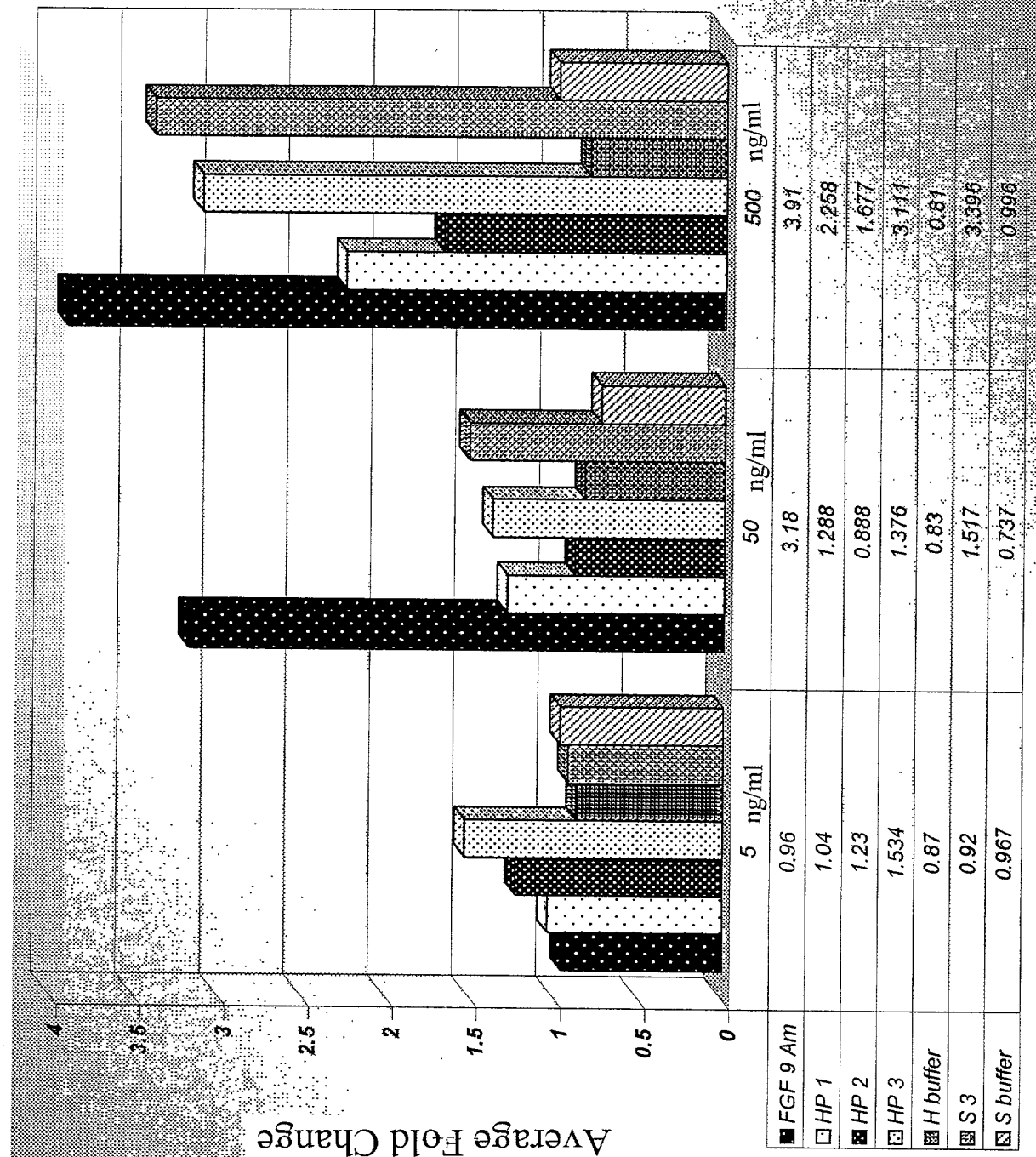


FIG. 5

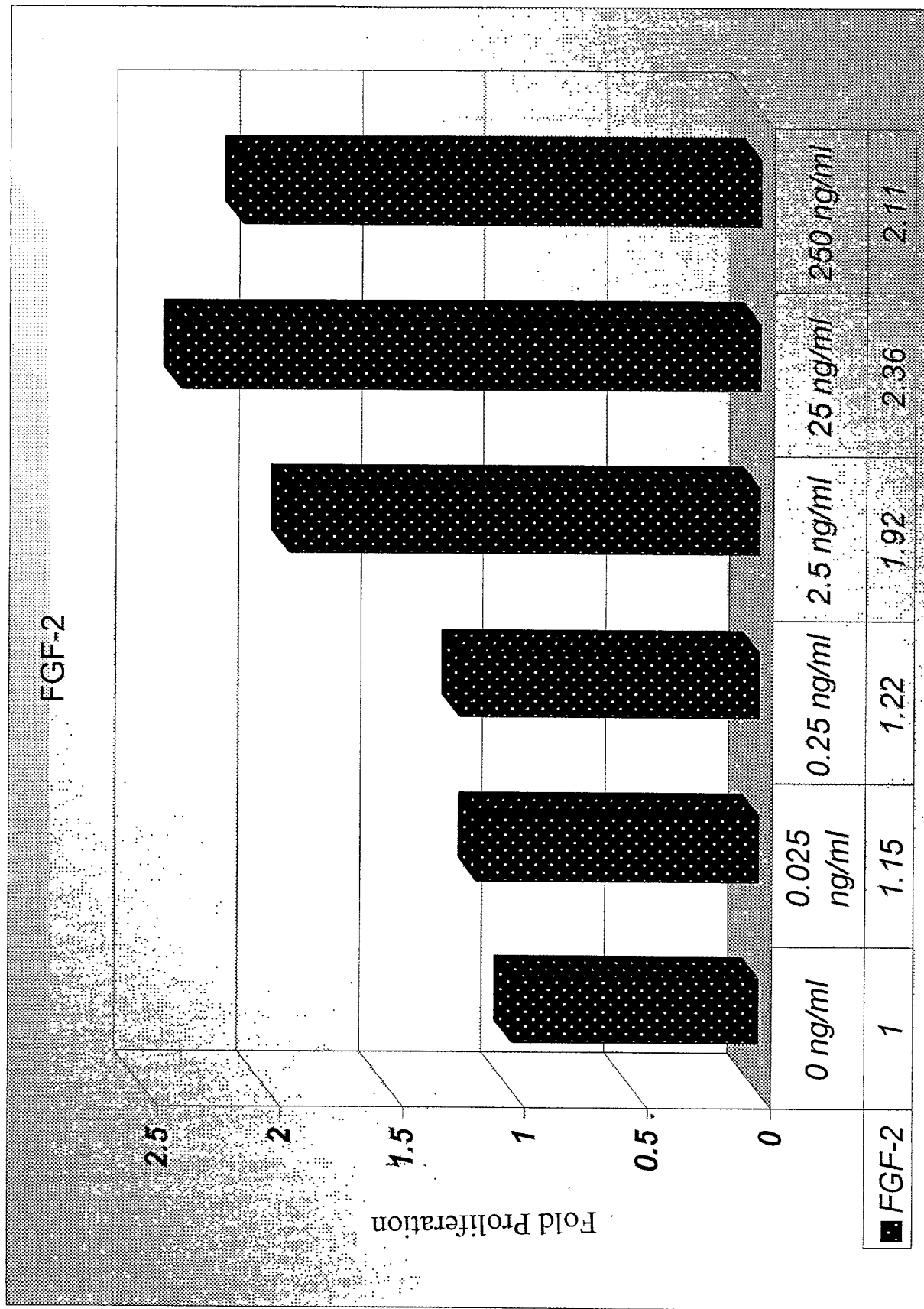


FIG. 6A

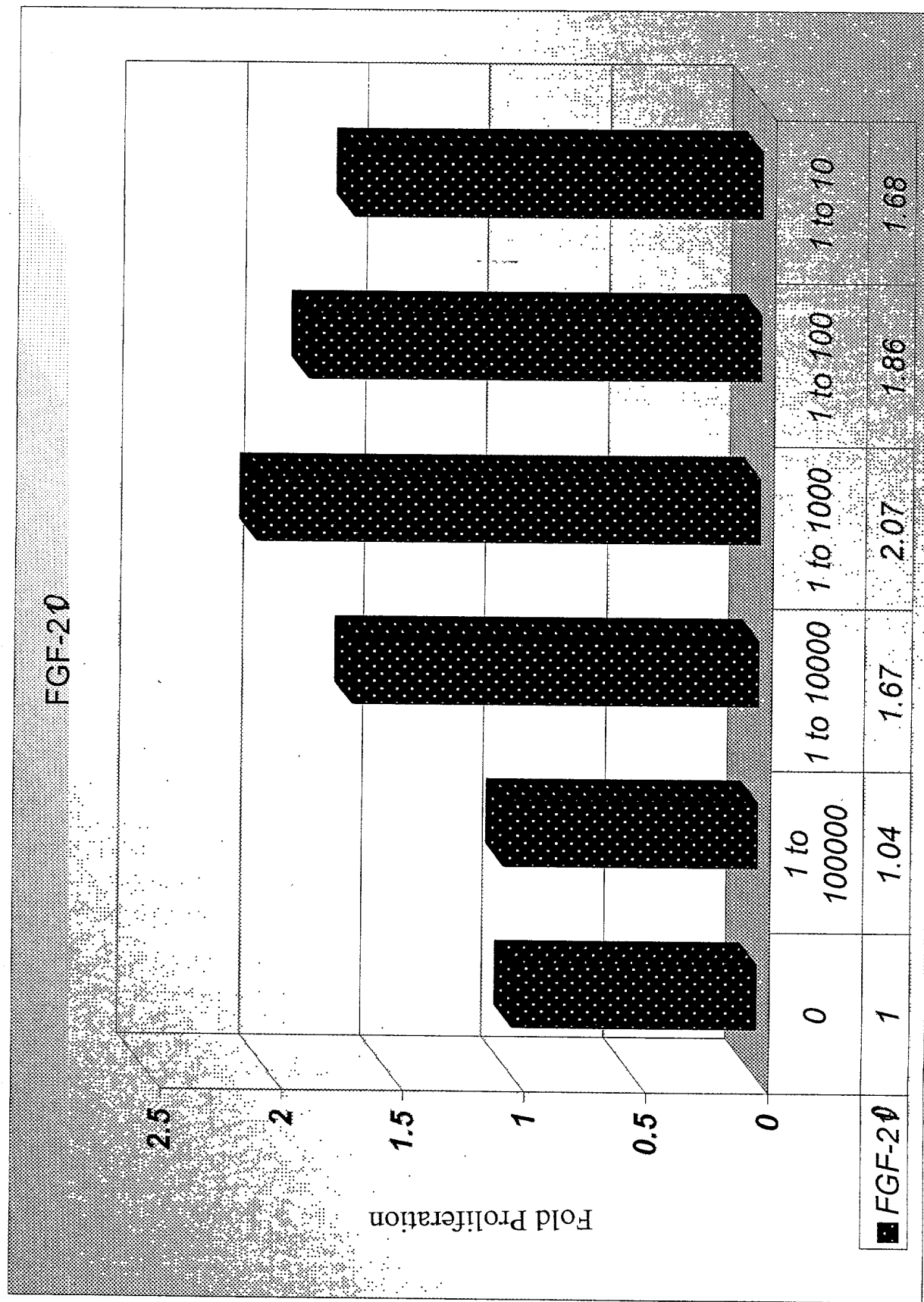


FIG. 6B

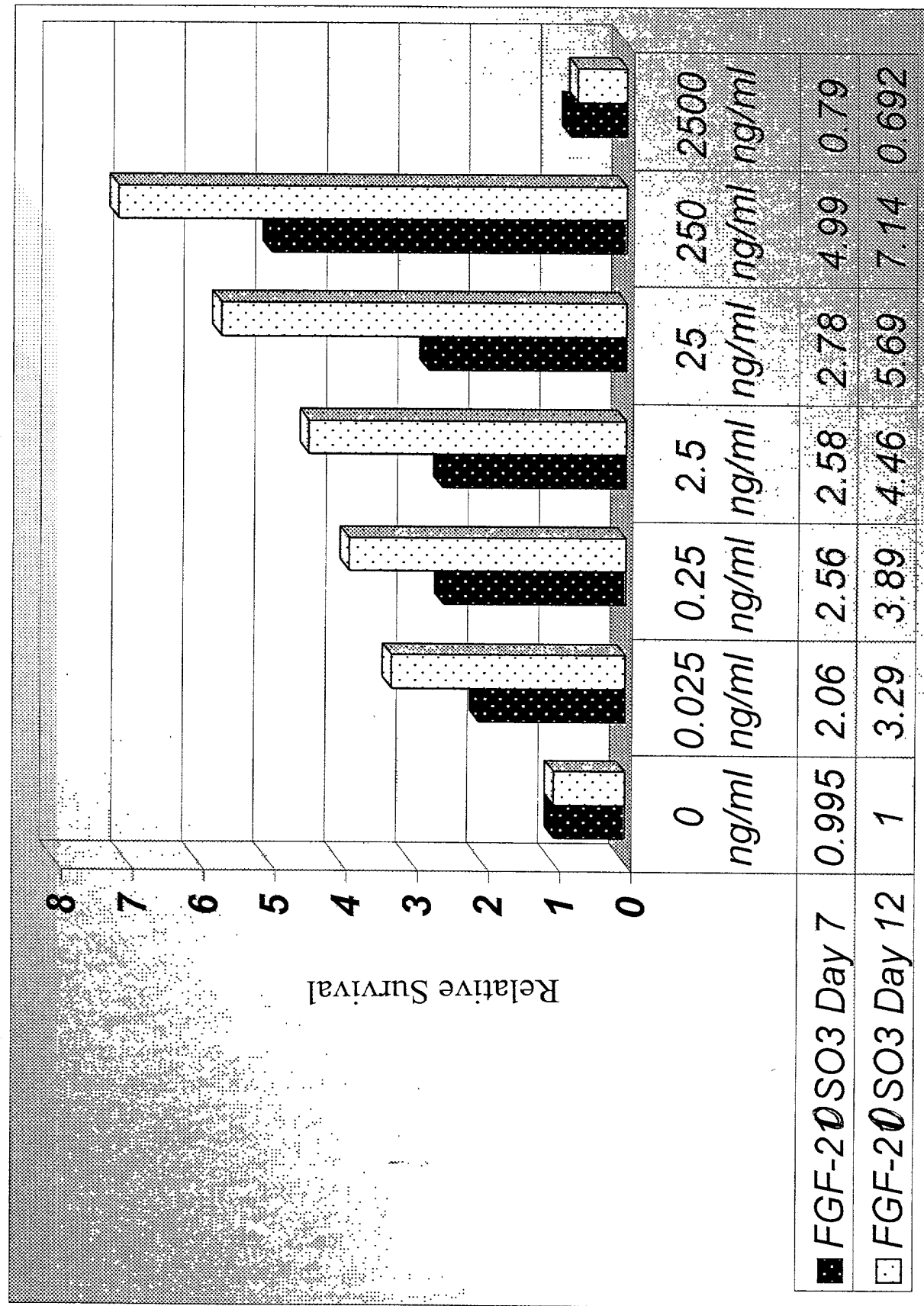


FIG. 7A

FIG. 7B

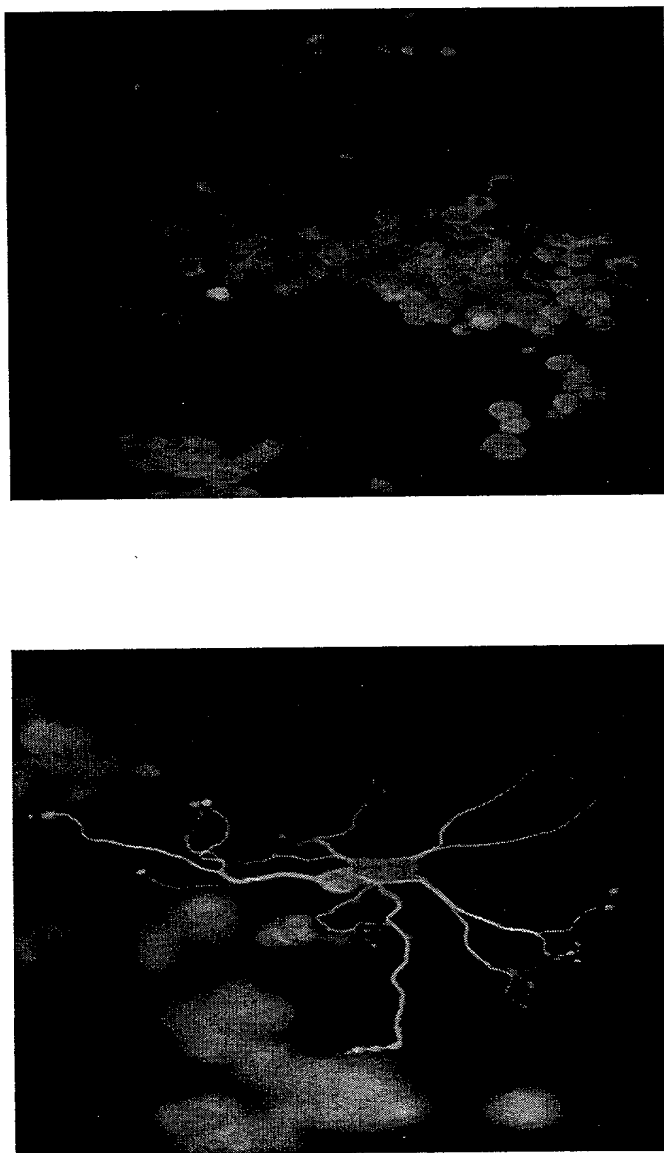


FIG. 8

Primary Rat Neurons Treated with Growth Factors for 5 Days

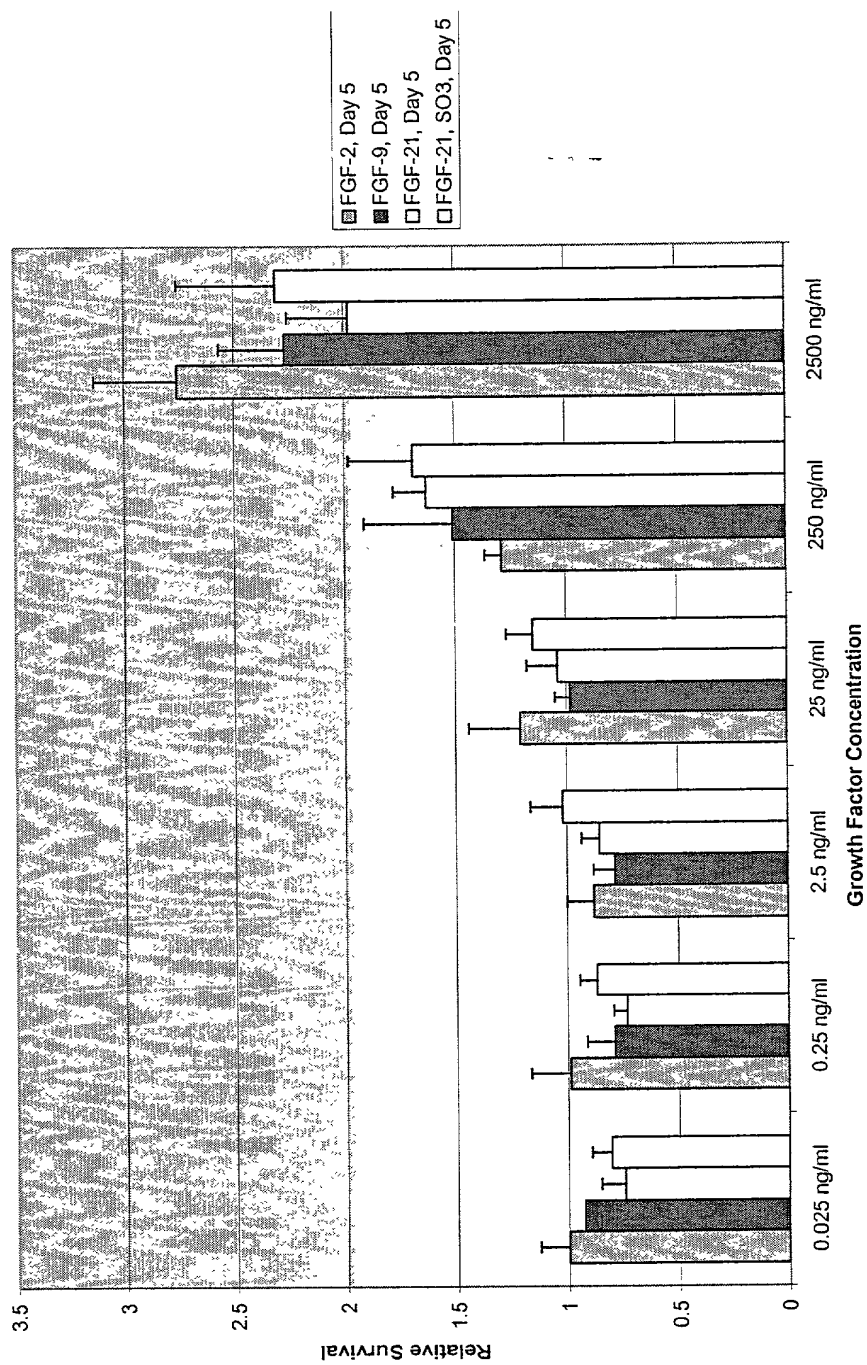


FIG. 9